

March 7, 1959.

Dear Josh,

Thanks for your letters. If you wish to use a given name please call me John. Jack is not my name, and nobody who has taken the trouble to ask me uses it. My sister does, but she always knows what others want better than they do.

I raised the question of moon dust in my article on the origins of life in New Biology 16, p. 23. The idea that extra-terrestrial organisms are vulnerable to terrestrial bacteria is due to H.G. Wells (The War of the Worlds). See also O.W. Stapledon (First men and last men). If you have not read these you have something to look forward to.

However, neglecting literary research, I am all for keeping Mars and Venus sterile. I am not so interested in the moon. Any part of it exposed to direct sunlight must get enough high temperatures, not to mention UV and soft X rays, to kill any organisms adapted to life under a good atmospheric blanket. I can't easily advise you on how to proceed. I have few contacts with the U.S.S.R. But I would think the people to contact were Oparin, and the bloke at Alma Ata ( ? <sup>Tikhonov</sup> ) who calls himself an astro<sup>g</sup>tarist and studies changes in the spectrum of Mars. You will find a note on his work in a recent number of New Biology. I will sign any document with which I agree.

I am rather isolated here. The only alternative is to <sup>do</sup> research and be a grand old man. My colleague Subodh Roy is now getting terrific results on rice. One variety, if you pull the heads off the stems instead of cutting off the leaves, will regenerate a new crop bigger than the first in about 50 days. If this is at all common, he has solved SE Asia's food problem for the next 20 years. Of 3 strains tested for interaction, one put up the yield of another in mixed cultivation by about <sup>25</sup>12% while its own was unaltered. If Roy can repeat his results this year I hope I can get some money for large scale work. The next problem is this: can we make rice male sterile by spraying with a suitable substance, leaving the ovules unaffected? If so it may be possible to repeat the hybrid corn ( Zea ) story here. The Delhi group think in terms of the biology of 25 years ago, and if Ganesan goes to them he is likely to putrefy for 25 years until he is senior enough to apply your ideas of today, which will then be 25 years out of date. I may be able to make him an offer a year hence to do fools' experiments here, if you are still enthusiastic about him. But I can promise nothing. I have however about 18 ideas about the biology of rice and its associates, e.g. blue-green algae. If only 17 of them are nonsense we may make a break.

My wife is at last getting some Antherea mylitta caterpillars to grow under more or less controlled conditions. I will try to remember to give messages from you to Mahalanobis ♂ & ♀. Remember us to Lederberg ♀ ( Esther if I remember ).

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Yours sincerely,

J. B. S. Haldane  
( J.B.S. Haldane )